

AMENDMENTS TO THE CLAIMS

1. (currently amended) A fuel cell formed by stacking an electrolyte electrode assembly and separators alternately, said electrolyte electrode assembly including a pair of electrodes and an electrolyte interposed between said electrodes,

wherein a reactant gas supply passage and a reactant gas discharge passage extend through said fuel cell in a stacking direction of said fuel cell;

a reactant gas flow field is formed for supplying a reactant gas along an electrode surface;

said reactant gas flow field includes a plurality of serpentine flow grooves having substantially the same length, said serpentine flow grooves including an even number of turn regions formed on a surface of said separator;

a substantially triangular inlet buffer for connecting said serpentine flow grooves and said reactant gas supply passage;

a substantially triangular outlet buffer for connecting said serpentine flow grooves and said reactant gas discharge passage;

one side of said inlet buffer and one side of said outlet buffer are substantially perpendicular to terminal portions of said serpentine flow grooves; and
said inlet buffer and said outlet buffer are formed substantially symmetrically with each other.

2. (previously presented) A fuel cell according to claim 1, wherein a plurality of bosses are formed in at least one of said inlet buffer and said outlet buffer.

3. (previously presented) A fuel cell according to claim 1, wherein each of said reactant gas supply passage and said reactant gas discharge passage has at least one oblique side; and
said oblique side of said reactant gas supply passage faces an oblique section of said inlet buffer, and said oblique side of said reactant gas discharge passage faces an oblique section of

said outlet buffer.

4. (canceled)

5. (currently amended) A fuel cell according to claim 1, wherein said fuel cell includes a coolant supply passage and a coolant discharge passage, said reactant gas supply passage includes a fuel gas supply passage and an oxygen-containing gas supply passage, and said reactant gas discharge passage includes a fuel gas discharge passage and an oxygen-containing gas discharge passage; and

among six passages comprising said fuel gas supply passage, said oxygen-containing gas supply passage, said coolant supply passage, said fuel gas discharge passage, said oxygen-containing gas discharge passage, and the coolant discharge passage, three passages extend through a left end of said separator, and the other three passages extend through a right end of said separator.

6. (previously presented) A fuel cell formed by stacking an electrolyte electrode assembly and metal separators alternately, said electrolyte electrode assembly including a pair of electrodes and an electrolyte interposed between said electrodes,

wherein a reactant gas supply passage and a coolant passage extend through said fuel cell in a stacking direction of said fuel cell;

a reactant gas flow field is formed on one surface of said metal separator for supplying a reactant gas along an electrode surface, and a coolant flow field is formed on the other surface of said metal separator for supplying a coolant along the other surface of said metal separator;

said metal separator includes a substantially triangular buffer; and

said buffer has one side connected to said reactant gas supply passage on said one surface of said metal separator, and another side connected to said coolant passage on said other side of said metal separator, and a still another side connected to said reactant gas flow field and

said coolant flow field on both surfaces of said metal separator.

7. (previously presented) A fuel cell according to claim 6, wherein said reactant flow field includes a flow groove having a curve.

8. (previously presented) A fuel cell according to claim 6, wherein said metal separator includes first and second metal plates which are stacked together;

 said first metal plate has said reactant gas flow field on a surface opposite to said second metal plate, and said coolant flow field is formed between said first metal plate and said second metal plate; and

 a substantially rectangular buffer formed on said first metal plate, and a substantially rectangular buffer formed on said second metal plate are at least partially overlapped with each other in said stacking direction.

9. (previously presented) A fuel cell according to claim 6, wherein said reactant gas supply passage has at least one oblique side; and

 said oblique side of said reactant gas passage faces an oblique section of said buffer.

10. (previously presented) A fuel cell according to claim 6, wherein one side of said buffer is substantially perpendicular to a terminal portion of said reactant gas flow field.

11. (previously presented) A fuel cell according to claim 6, wherein said reactant gas passage includes a fuel gas supply passage, an oxygen-containing gas supply passage, a fuel gas discharge passage and an oxygen-containing gas discharge passage, and said coolant passage includes a coolant supply passage and a coolant discharge passage ; and

 among six passages comprising said fuel gas supply passage, said oxygen-containing gas supply passage, said coolant supply passage, said fuel gas discharge passage, said oxygen-

containing gas discharge passage, and the coolant discharge passage, three passages extend through left ends of said first and second metal plates, and the other three passages extend through right ends of said first and second metal plates.